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The Economics of Vertical Restraints and its Relevance to Competition Policy in the Food Marketing System

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Introduction

Since the publication of texts in the 1980s relating to the food manufacturing and retailing sectors in the UK and U.S. (Burns *et al.*, 1983; Marion, 1986), it has become an accepted, stylized fact that the food chain in developed countries can be characterized as a series of vertically inter-related input-output markets stretching from farm input suppliers through to food retailing. A dominant characteristic of the analysis conducted by agricultural economists in this area has been the focus on the horizontal structure and behavior of specific stages of the system, in particular food manufacturing and retailing. This research has either followed the structure/conduct/performance (SCP) tradition (see Connor *et al.*, 1985), or, more recently, has been based on the so-called New Empirical Industrial Organization (NEIO) approach which emphasizes the direct estimation of market power using structural econometric models (Perloff, 1992).

In contrast, a good deal less emphasis has been placed on analyzing the vertical aspects of the food chain. This is not to say that such aspects have been ignored. U.S. researchers have concerned themselves for many years with the issue of vertical coordination in the food chain, vertical coordination being defined by Mighell and Jones (1963) as:

> "....the general term that includes all the ways of harmonizing the vertical stages of production and marketing. The market-price system, vertical integration, contracting and cooperation singly or in some coordination are some of the alternative means of coordination." (p.7)

As the definition suggests, the focus has been on both describing the vertical structure of the food marketing chain, particularly for farming and first-stage processing, and also analyzing the coordination performance of the chain, where performance is judged in terms of whether a vertical marketing system delivers the right quantity and quality of goods to the right place at the right time (see Sporleder, 1992).

As well as the focus on vertical coordination, there has been analysis aimed at explaining the nature and effects of the farm-retail price spread. Much of the work in this area has been conducted in the spirit of Gardner's (1975) seminal paper (e.g. Heien, 1980), and the most recent work in this vein has attempted to make a direct analytical connection between horizontal competition in the food manufacturing and retail sectors and the gap between farm-gate and retail prices (e.g. Holloway, 1991). In addition, there has been some analysis of the nature of bilateral market interaction between adjacent stages in the food marketing system. For example, Burns (1983) and Hamm and Grinnell (1983) have reviewed the nature of inter-relationships between food manufacturers and retailers in the UK and U.S. respectively, while Azzam and Pagoulatos (1990), Rogers and Sexton (1994), and Hyde and Perloff (1994) have focused on estimating the extent of oligopsony power in the food industry using techniques from the NEIO.

However, apart from the above research, there has been little formal analysis of the nature of vertical contractual relations between stages of the food chain. Although Burns refers to the discounting to retailers by food manufacturers in the UK food chain, a practice investigated in 1981 by the Monopolies and Mergers Commission (MMC), and McLaughlin and Rao (1990) have analyzed the product selection behavior by food retailers in the U.S., agricultural economists have not incorporated such aspects of vertical behavior into models of the food system, it generally being assumed that firms in the chain conduct their transactions through arms' length, linear price contracts.

This paper considers those aspects of vertical market interaction which, while apparently widely used, have largely been ignored by agricultural economists. These are broadly termed vertical restraints and include, among others, the use of discounts (in various forms), slotting

allowances, exclusive dealing and exclusive territory(ies) arrangements. There are perhaps four obvious reasons why such restraints may increasingly characterize the food system: first, the maintenance (or creation) of dominant market positions in upstream or downstream stages of the food system; second the appropriation of rents by one stage from subsequent stages of the system; third, control of promotional effort and ensuring efficient distribution; fourth, competition between products for increasingly scarce shelf-space.

It is only fairly recently that industrial organization theorists have explored the welfare implications of vertical restraints[1]. Unfortunately, while there is an extensive literature dealing with such restraints, it gives conflicting predictions about their private and social effects. Specifically, the theory generates results showing that restraints can either increase both private and social welfare or increase private and lower social welfare. Perhaps not surprisingly, this can lead to inconsistencies in public policy towards such restraints[2].

The overall purpose of this paper, therefore, is twofold. The first objective is to provide a selective review of the recent theoretical literature on various aspects of vertical market competition. Section 1 of the paper defines precisely what is meant by a vertical restraint, and outlines the basic method for analyzing such arrangements, focusing on simple two-part tariffs and other types of restraint. In Section 2, the analysis is expanded to consider more complex vertical structures and how restraints may be socially harmful. The second objective, covered

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[1] Vickers and Waterson (1991) recently noted, "...Vertical relationships were once rather a minority interest in industrial economics, as an examination of the older texts on your shelves (or the shelves of your older colleagues or teachers) will show. This is particularly true of the literature on vertical restraints, which is appearing in texts only now, having been formally developed since the mid-1980s. To be sure, these developments built upon earlier analysis and policy debate (for example about resale price maintenance in the UK),...., but there was not the same degree or breadth of concern." (p.445)

[2] In this sense, the term "restraints" is emotive, and, as Bork (1978) suggests, has led to the anti-trust authorities pre-judging the effects of such vertical market practices as being negative.

in Section 3, is to review recent rulings on vertical market issues in the food sector by the U.S. and UK competition authorities. The aim of this is to assess both the extent to which the recent theoretical literature is a reasonable characterization of vertical market competition in the food sector, and whether the competition authorities perceive different forms of vertical restraints as welfare-enhancing or otherwise. Finally, Section 4 summarizes and concludes.

1. Basic Analysis of Vertical Restraints

(i) Definition

Normally in economic theory the concern is with contracts that specify linear prices, i.e. there is a simple uniform posted price such that a buyer pays a seller an amount proportional to the quantity purchased. However, in vertical markets, rather more complex, non-linear contractual arrangements are often observed, which are generally known in the literature as *vertical restraints* (Rey and Tirole, 1986a). A number of such restraints are discussed in the literature (see Katz, 1989), legal or otherwise. Most commonly, these are: *two-part tariffs*, which consist of a franchise fee and a linear price; *retail price restraints*, which relate to contracts where limits are placed on the price at which a retailer can sell a manufacturer's good; *exclusive dealing* and *exclusive territories* which are contractual provisions restricting a retailer to carrying only one manufacturer's brand, and the geographical area of sales of that brand(s); *full-line forcing* which relates to a retailer having to carry the complete range of a manufacturer's goods, and the related activities of *tie-in sales* and *commodity bundling* whereby the sale (price) of one product is conditioned on the purchaser buying some other product (see Carbajo, de Meza and Seidmann, 1990; Whinston, 1990).

While the existence of such practices has been known for some time, as Mathewson and Winter (1984) note:

> "These restrictions have been a puzzle to economists, a source of contention in antitrust legislation, and a subject relatively unexplored in economic theory." (p.27)

(ii) Simple Two-Part Tariffs

The modern theory of vertical restraints can be thought of as a particular class of the *principal-agent* problem (Rey and Tirole, 1986a; Katz), although the theory of vertical restraints goes beyond the usual single principal-single agent problem. Following Stiglitz (1987), the standard principal-agent problem is one where a principal (the manufacturer) is seeking a contract that will maximize its expected profits, given that the agent (the retailer) undertakes some set of actions to maximize its expected profits given the compensation scheme, and that the agent is willing to undertake the contract (the rationality constraint).

Formally, a generic version of this problem can be written down as follows for the single manufacturer-single retailer case (see Katz). Suppose the manufacturer produces an intermediate good x at a constant unit cost of c_w, the good being sold to a retailer. The retailer then combines x with retailing inputs y at constant unit cost c_r in order to sell a final good. For simplicity, assume that x is also the final good. In conducting this sale, the retailer applies some effort e, say advertising, which generates retailer revenues of $R(x,y,e;\theta)$, where θ is a demand parameter. e may be unobservable by the manufacturer, and θ may be stochastic. If the retailer makes the manufacturer a payment of $W(x,y,e,\theta)$, then the retailer's objective function can be written as:

$$\underset{x,y,e}{\text{maximize}} \; \pi_r[R(x,y,e,\theta) - W(x,y,e,\theta) - c_r y,e;\, \theta] \qquad (1)$$

Given the agent's actions, the manufacturer earns:

$$\pi_m[W(x,y,e,\theta) - c(x)] \tag{2}$$

Suppose that the manufacturer can make take-it-or-leave-it contract offers, then the basic principal-agent problem is to set a contract that induces the retailer to act in such a way as to maximize the sum of the expected profits of the two levels of the marketing system, and which also enables the manufacturer to appropriate all of these profits. The optimal contract would be one which satisfies the maximand:

$$\begin{aligned} &\underset{T,x,y,e}{\text{maximize}} \; T - c_w x \\ &\text{subject to } \pi_r[R(x,y,e;\theta) - T - c_r y,e;\, \theta] \geq 0 \end{aligned} \tag{3}$$

where $T-c_w x$ represents total expected profits in the system, and the constraint is the retailer's rationality constraint, i.e. the retailer will only accept the contract offered by the manufacturer if it earns at least its reservation level of profits, which have been normalized to zero.

In principle, a manufacturer could offer a contract that specifies the optimal levels of x^*, y^*, and e^* that would maximize the total profits of the vertical system, while appropriating all of these profits for itself. For example, the following contract could be specified:

$$W(x,y,e,\theta) = \begin{cases} G(\theta) \text{ if } (x,y,e) = (x^*,y^*,e^*), \\ G_0, \text{ otherwise} \end{cases} \tag{4}$$

where $G(\theta)$ satisfies $\pi_r[R(x^*,y^*,e^*,\theta) - G(\theta) - c_r y^*(\theta),e^*(\theta);\theta] = 0$, and $G_0 < 0$

i.e. the retailer either receives the reservation level of profits if there is contract compliance, or incurs a penalty. However, as Katz points out, such a contract is highly infeasible, largely because of the monitoring and enforcement costs.

Much of the theory of vertical restraints in fact deals with cases that Rey and Tirole (1986a) have termed *control environments*. These are a class of the principal-agent problem where there is no exogenous uncertainty about the environment when the contract is signed, and so risk aversion on the part of principal and agent is irrelevant and there are no problems of "shirking" on the part of the retailer[3]. In a control environment, several variables have to be solved for in the vertical structure, e.g. the quantity of x sold, wholesale and retail prices P_w and P_r, promotional effort e, and franchise fees g. Those variables that can be observed and put in the contract are defined as *instruments*, and the control problem is to achieve a particular *target(s)* using a *sufficient* set of instruments, i.e. the set of instruments that will just maximize vertical profits, where vertical profits are those that would arise either if all variables were costlessly observable and specified in the contract, or the manufacturer were vertically integrated with the retailer (Mathewson and Winter, 1984).

The key to the contractual problem then is the need on the part of the manufacturer to overcome the existence of vertical *externalities* between the two stages of the marketing chain (Rey and Tirole, 1986a; Katz). The actions of one party affects the profits of both manufacturer and retailer, although each party makes decisions only in terms of their own expected profits. This is best illustrated with reference to the well-known issue of double marginalization (Spengler, 1950). As a benchmark, suppose that the manufacturer and retailer were vertically integrated, the price of the final good would be P_r^v which maximizes profits of the vertical system, $\pi^v=(P_r^v-c_w)x^v$, where, for simplicity, other retailing inputs y, effort e, and the demand parameter θ have been suppressed.

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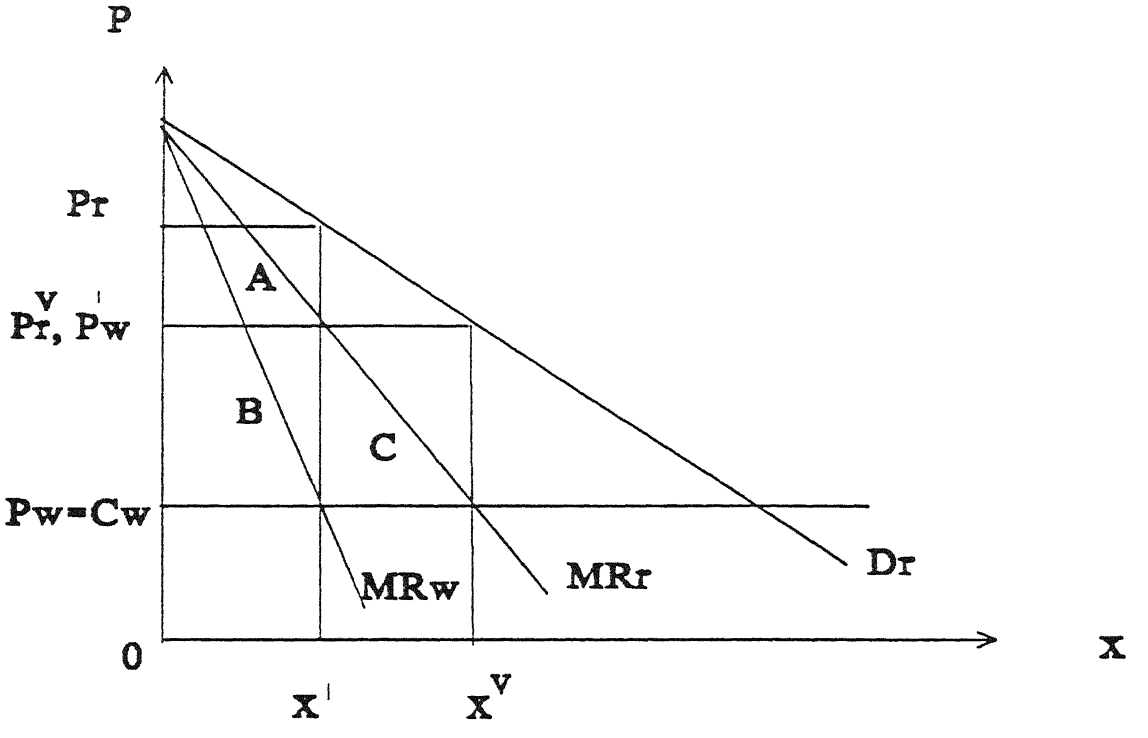
[3] Rey and Tirole (1986a) comment that even in the principal-agent literature, where uncertainty about agent actions is normally assumed, the control problem is usually rather trivial.

Figure 1: Double Marginalization



In **Figure 1**, π^v are given by the area (B+C), where MR_r is the marginal revenue curve at retail, and c_w are the internal transfer costs. In contrast, in the non-integrated structure, the manufacturer could offer a linear price contract $W(x)=P_w'x$. Given this contract, the retailer maximizes profits $\pi_r=(P_r-P_w')x'$, area A in **Figure 1**. In addition, the manufacturer charges a wholesale price $P_w'>c_w$ in order to maximize profits, area B in **Figure 1**, which exceeds the transfer price of c_w under vertical integration. Therefore, because of the two marginalizations by manufacturer and retailer, the non-integrated retail price exceeds the integrated price, $P_r>P_r^v$.

In both the vertical restraints and principal-agent literature[4], it is a basic proposition that with retail prices as the only target of vertical control, a simple two-part tariff will resolve this

[4] See Shavell (1979) and Sappington (1991) for a discussion of the principal-agent literature relating to the sharecropper problem.

externality without the need for vertical integration. Suppose the retailer is offered a contract $W(x)=g+P_w x$, where $P_w=c_w$, and the franchise fee $g=(P_r^v-P_w)x$, so that the retailer is the *residual claimant* of aggregate vertical profits, i.e. the retailer is able to capture any additional vertical profits due to its actions. By charging the retailer the marginal cost of the intermediate input, the retailer is induced to take the decision that maximizes vertical profits, i.e. x^v is chosen and the franchise fee and the wholesale price are sufficient instruments[5].

If for some reason two-part tariffs are infeasible (Gallini and Winter, 1983), then resale price maintenance (RPM) can also be used to resolve the double marginalization issue, because the retail price is fixed at P_r^v, and the intermediate good is also sold at P_r^v, so that the retailer makes zero profit, but the manufacturer appropriates all the vertical profit. In addition, note that either the use of vertical restraints or vertical integration here will generate a Pareto welfare improvement, as the final retail price will be lower[6].

(ii) Extensions of the Simple Model

The above analysis can easily be extended to the case of multiple retailers, following the seminal analysis of Mathewson and Winter (1984, 1986). Given a standard spatial, retail market structure, each retailer buys the manufacturer's good x at the wholesale price P_w, and applies other retailing inputs y in fixed proportions at constant unit cost c_r, where the good x is produced at unit cost c_w by a single manufacturer. At each retail location, effort e is expended in order

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[5] This result also holds under uncertainty where the retailer is risk neutral (see Sappington).

[6] The likely effects of vertical integration on economic welfare have been subject to a good deal of attention in the literature. If the downstream technology is one of fixed proportions, it is expected that vertical integration will result in a fall in final output price, except where the downstream industry is either competitive or where vertical integration results in increased horizontal concentration downstream. In the case of variable proportions, final output price is expected to fall, except in the case of increased horizontal concentration downstream (Waterson 1982; Abiru, 1988). See Hart and Tirole (1990) for further analysis.

to inform consumers of the good, and some part of this effort α may spill over into other locations. This effort, which cannot be observed costlessly by the manufacturer, is in the form of advertising. Free entry into retailing ensures that zero profits are made in equilibrium.

Just as in the single manufacturer/single retailer case, Mathewson and Winter (1984) show that a simple linear price contract with respect to the wholesale price will not be sufficient to maximize the profits of the vertical system. As the manufacturer is a monopolist, it sets prices in excess of unit cost, $P_w > c_w$, and the retailers set price above the vertically integrated price, $P_r > P_r^v$. In addition, retailers advertise too little, an effect that is increased when there are advertising spillovers in retailing. The intuition of this result is straightforward. When retailers set the final price for x and expend effort on advertising, they know that either lowering the retail price and/or advertising more will result in the manufacturer appropriating the increase in profits due to the fact that the wholesale price exceeds the manufacturer's costs, i.e. the retailers are not the residual claimants.

In the case of no advertising spillovers, Mathewson and Winter (1984) show that a simple two-part tariff will be a sufficient instrument to remove the vertical externality. As before, each retailer is offered a contract $W(x)=g+P_w x$, where $P_w=c_w$ and g is the franchise fee. Essentially, the wholesale price set at cost c_w induces the retailers to set the optimal retail price and advertising levels, and the manufacturer appropriates the profits through the franchise fee. The consumer will also benefit from lower retail prices.

In the case of advertising spillovers, the manufacturer will have to use both a franchise fee and RPM as instruments of vertical control. This follows from the fact that even if the manufacturer sets $P_w=c_w$, the retailers will still advertise too little when $\alpha>0$. Therefore, in this

case, the manufacturer simultaneously sets a wholesale price $P_w<c_w$ in order to induce more advertising, and, because the retail price will be too low, specifies the optimal retail price P_r^*, and extracts the profits with the franchise fee. Again, retail prices will be lower, even in the presence of retail price maintenance.

The above results indicate that instruments of vertical control, such as RPM, will be necessary to remove the double marginalization externality if either simple two-part tariffs are infeasible or because there are additional targets of vertical control such as advertising. In addition, O'Brien and Shaffer (1992) note that the use of vertical controls such as RPM and territorial restrictions may also occur because of demand and cost uncertainty. To get a sense of the role of uncertainty, the framework developed in Rey and Tirole (1986a, 1986b) and Tirole (1989) is outlined. Consider a vertical market structure where a single, risk-neutral manufacturer produces good x at constant unit cost c_w, which is supplied to a retailing sector made up of two firms chosen from a competitive supply of retailers. The retailers, who are either risk-neutral or risk-averse, combine good x with other retailing inputs y at a constant unit cost c_r, demand for x being given by the function $x(P_r,\theta)=\theta-P_r$, where θ is a demand parameter. In setting a contract, the manufacturer can observe the wholesale price P_w and the amount of x delivered to the retailer, but the demand parameter θ and retailing costs c_r cannot be observed. In contrast, the retailer may get information about θ and c_r after the contract is signed. As a result of this information asymmetry, there may be retailer moral hazard.

Given this setting, the focus is on three possible vertical market arrangements. First, if there is Bertrand competition between the retailers, then, whatever the state of nature, the retail price is $P_r=(c_r+P_w)$ in equilibrium, franchise fees are zero and the manufacturer charges a

wholesale price that would induce the retail monopoly price. Second, the manufacturer could assign exclusive territories to the retailers, and charge a wholesale price $P_w=c_w$ so that each retailer acts as a monopolist in its assigned market, the rents being appropriated with a fixed fee. Third, the manufacturer could use RPM to set the retail price at the monopoly level, sell the good x at marginal cost c_w, and extract the rents with a franchise fee.

With uncertainty, these restraints are not necessarily equivalent. In the case of retailer risk neutrality, the manufacturer would prefer the arrangement of exclusive territories to either competition or RPM. With exclusive territories, the manufacturer maximizes expected vertical profits by charging a wholesale price $P_w=c_w$, and then delegates the pricing decision to the retailer who can adapt to uncertainty without being constrained either by the manufacturer, as in the case of RPM, or the other retailer in the case of competition. In contrast, neither RPM nor competition are as effective at achieving this objective. In the case of competition, the retail price is entirely determined by cost, and is unresponsive to the demand parameter θ, while for RPM, the retail price is fixed before the uncertainty is resolved, and so is not adapted to either cost or demand conditions.

In the case of retailer risk aversion, there is a need to provide the retailer with some insurance, because any increase in retailer risk reduces the level of the franchise fee that the manufacturer can set. It turns out that competition is likely to be the most preferred arrangement. This results from the fact that Bertrand competition provides perfect insurance under both cost and demand uncertainty, i.e. neither retailer makes positive profits. RPM also provides perfect insurance in the case of demand uncertainty if the retailer cost c_r is known, because the manufacturer can force the level of retailer profits to zero, however, with uncertainty about c_r,

RPM provides no insurance to the retailer, and will, therefore, be dominated by competition and exclusive territories. In the case of exclusive territories with demand uncertainty, if the wholesale price is set equal to wholesale costs, the retailer bears all the risk, and, therefore, the manufacturer has to raise the wholesale price in order to reduce the extent of retailer profit risk.

Recent papers by O'Brien and Shaffer (1992) and McAfee and Schwartz (1994) indicate that even in the absence of uncertainty, two-part tariffs may fail to maximize vertical profits if competing retailers do not observe each others' supply contracts, i.e. there is no public commitment by the manufacturer to a retail contract. In particular, with unobservable contracts, a manufacturer and retailer can increase bilateral profits by reducing the transfer, and hence the retail price, shifting profits away from other retailers. Such opportunism can lead to retail prices, and, hence, joint profits being below the vertically integrated level in equilibrium. O'Brien and Shaffer show that, given a single manufacturer and multiple Bertrand retailers, the problem of vertical control can be resolved by using either exclusive territory restraints or resale price maintenance.

(2) Further Analysis of Vertical Restraints

(i) Facilitation of Collusion

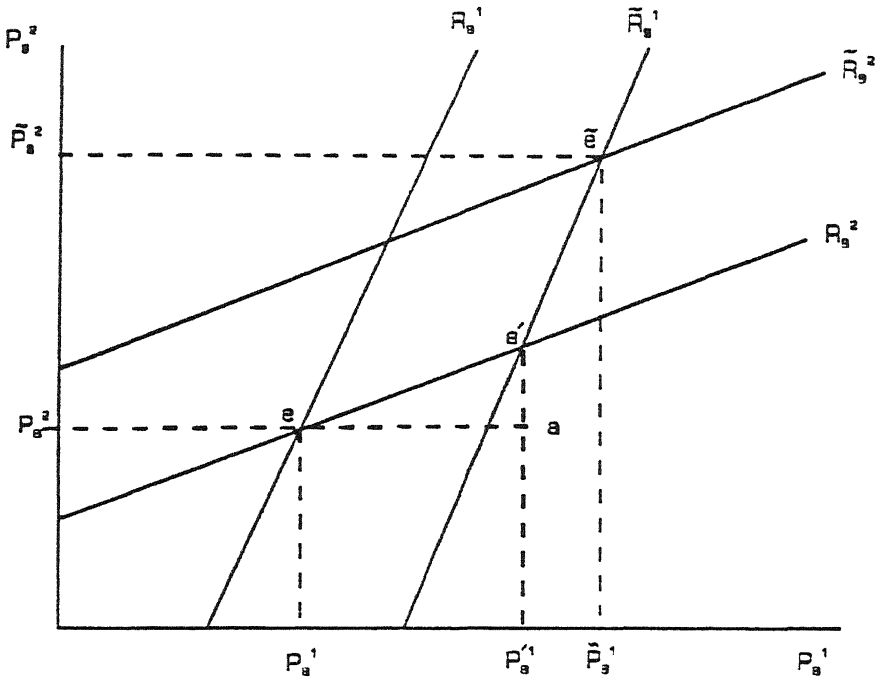
A key characteristic of the simple two-part tariff story and its generalization by Matthewson and Winter (1984) is that vertical restraints, aimed at removing vertical externalities such as the double marginalization problem, can enhance efficiency. However, it is also possible that vertical restraints may be aimed at reducing competition at either the manufacturing or the retailing level, and, hence, may not be socially desirable if collusion is *facilitated* at either one

or both levels (Rey and Stiglitz, 1988). The ambiguity in the theory is best highlighted with reference to the restraints of *exclusive dealing* and *exclusive territories*. The former is designed to prevent a retailer from selling other manufacturers' products, and, hence, to reduce *inter-brand* competition. The latter is aimed at reducing *intra-brand* competition by restricting the geographical area over which a retailer can sell the manufacturer's product.

In the case of exclusive dealing, the traditional argument has been that exclusive dealing arrangements are aimed at *foreclosing* other manufacturers from distributing their brands through the relevant retailer(s), which forces the excluded manufacturers to utilize less efficient retailing outlets (Comanor and Frech, 1985). Another strand of the literature shows that exclusive dealing can be efficiency enhancing if it eliminates an inter-brand externality that exists when a manufacturer provides services or investments to a retailer, i.e. if a retailer carries other brands, the manufacturers of those brands will benefit from the services, and a free-rider problem arises, and thus manufacturers under-invest in such services (Marvel, 1982; Besanko and Perry, 1993).

Rey and Stiglitz argue that the literature on the efficiency-enhancing effects of vertical restraints tends to ignore the effect such restraints can have on competition at both stages of the marketing chain. In order to illustrate this, a result due to Bonanno and Vickers (1988) is outlined. Consider a situation where manufacturing consists of a duopoly selling differentiated goods to a downstream duopoly retailing sector, and, at each stage, firms play a Nash game in prices. Suppose each manufacturer delegates one retailer to sell their good (i.e. exclusive dealing). The situation where the retailers compete with each other is compared to that where manufacturers combine exclusive dealing with a two-part tariff to induce collusion amongst the retailers.

Figure 2: Food Retailing Duopoly



Assume initially that the franchise fee is zero, and that each manufacturer sets a wholesale price equal to marginal cost. Given this, neither food retailer can credibly raise the retail price beyond the Nash level as they will be undercut by the other firm, the standard Bertrand result. This result is illustrated in **Figure 2**. R_B^1 are the initial retailer reaction functions, giving the Bertrand-Nash equilibrium at e. For analytical purposes, these are drawn for the case of retail prices equal to marginal cost which coincides with the case of efficient transfer prices when a manufacturer and retailer are vertically integrated.

However, setting the instrument of a linear wholesale price equal to marginal cost does not maximize vertical profits, because of competitive pricing by the retailers. Suppose that manufacturer 1 raises its wholesale price beyond marginal cost, which is credible given that it has an exclusive dealing arrangement with the retailer. This shifts retailer 1's reaction function

to $\tilde{R}_B^1$, the new Bertrand-Nash equilibrium being at e´. This raises retailer 1's profits which are appropriated by manufacturer 1 through the franchise fee. Given the nature of the stage-two game, it is also optimal for manufacturer 2 to set a two-part tariff with a higher price, shifting retailer 2's reaction function to $\tilde{R}_B^2$, the new equilibrium being at $\tilde{e}$, the franchise fee being used to appropriate the increased profits of retailer 2. Therefore, in this case, the sufficient vertical restraint is more profitable than vertical integration. Importantly, the use of exclusive dealing in conjunction with a two-part tariff reduces competition at both the manufacturing and retail levels, and is, therefore, welfare reducing.

In Rey and Stiglitz's model, which has a similar structure to that of Bonanno and Vickers, the vertical restraint is one of each retailer selling each manufacturer's product under an exclusive territories contract. This has the effect of reducing intra-brand competition, resulting in higher retail prices, the increased profits being appropriated with a fixed fee. In addition, because reduced competition at the retail level reduces the perceived elasticity of demand, manufacturers also increase wholesale prices as inter-brand competition declines. Again, there is a reduction in economic welfare.

It should be noted, however, that these results are sensitive to the assumption that reaction functions are upward-sloping, i.e. the goods are strategic complements[7]. If, in fact, the goods are strategic substitutes, it will no longer be optimal for a retailer to accept the previous contract. This follows from the fact that if reaction functions slope down in price space, as one retailer raises price, the competing retailer will lower price, and, as a result, lowers profits for the first firm.

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[7] A terminology originally due to Bulow, Geankoplos and Klemperer (1985).

A priori, this suggests that with strategic substitutes, the wholesale contract will consist of a lower wholesale price and a fixed fee, which would allow the retailer to credibly pre-commit to lowering the retail price. The fixed fee compensates for the lower profits due to the lower retail price, while the shift in the reaction function results in higher profits as the other retailer raises price. However, the upstream firm is setting a price less than marginal cost. Vickers (1985) suggests that, in this type of game, the manufacturer could recover lost profits by extracting the additional retailing profits through a franchise fee. In addition, if both manufacturers were to offer such a contract, downstream profits would fall as retailers cut prices, but, as this has the structure of a Prisoners' Dilemma, in the absence of cooperation between retailers, the Nash equilibrium would be to accept such a wholesale contract. Therefore, even if the notion of strategic substitutes is more appealing than strategic complements, the likely wholesale contract would lower the profit pie to all parties.

(ii) Retailer Bargaining Power

So far the analysis outlined has pretty much assumed that the principal (manufacturer) is able to make take-it-or-leave-it contract offers to the agent (retailer), subject to a rationality constraint. However, this ignores the possibility of any bargaining power on the part of retailers, in particular, the possibility that there exists increasingly scarce shelf-space. Shaffer (1991a) notes that new product introductions in the U.S. food sector increased from 2,600 per year in 1978 to 10,200 per year in 1987, at the same time there has been increased use of financial incentives paid by food manufacturers to retailers in order to induce the latter to provide shelf space for and promote the sale of the manufacturers' goods. Such negative franchise fees are variously referred to as *slotting allowances*, *display allowances*, *placement allowances*, *billing*

allowances, *promotional allowances*, or *merchandising allowances*[8]. These may be payments in cash or in kind, e.g. free goods. Regardless of the form, their salient characteristic is they are lump-sum rather than per unit payments. Even so, the payments may be repetitive, i.e., tied to new good introductions, re-introduction of old goods previously removed from a retailer's shelf, or periods of special market promotions such as end-aisle display, and local newspaper advertising.

Shaffer (1991a) provides an analysis of these allowances using a model similar to that of Bonanno and Vickers. Consider a situation where a competitive manufacturing sector sells homogeneous goods to a downstream retailing duopoly that is differentiated by factors such as location, sales personnel etc. The vertical market relationship consists of a two-stage game where at the first stage, each manufacturer sets a wholesale price and in the second stage, each retailer chooses a manufacturer as supplier and then sets a retail price. In contrast to Bonanno and Vickers' model, there is now direct competition between manufacturers for shelf-space such that they must set a price that leads to a retailer earning at least as much in profit as implied by other manufacturers' prices.

In the absence of franchise fees, the resultant equilibrium of the two-stage game will be sub-game perfect[9], i.e. manufacturers cannot raise wholesale prices beyond the Nash level of marginal cost, as the other firms will offer retailers a lower wholesale price, and neither retailer can raise the retail price beyond the Nash level as they will be undercut by the other firm.

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[8] Trade sources in the U.S. suggest that such allowances account for between a third and a half of total promotional expenditures by food manufacturers (Advertising Age, 1987). The MMC also note similar types of arrangement in the UK (1981, p.15).

[9] A sub-game perfect equilibrium is one where a set of strategies for each player comprises a Nash equilibrium for the entire game and every sub-game. It essentially rules out non-credible threats.

However, if there are franchise fees, a manufacturer can offer a retailer an observable[10] two-part tariff contract, which, in equilibrium, will constitute a higher wholesale price than previously, and a negative franchise fee, i.e. a retailing allowance[11]. The food retailer, facing a higher wholesale price, can credibly commit to paying this, because the lost revenue per sale is recouped through the retailing allowance. However, in committing to pay the higher wholesale price, competition is lessened at the retail level, as the other retailer raises price which feeds back into higher profits.

This result is described in **Figure 2**, where the direct and indirect effects of the contract are shown. e is again the initial equilibrium, and if a manufacturer supplying retailer 1 raises price above marginal cost, the new equilibrium is at e´. Retailer 1 can credibly raise price if the processor pays a fee that compensates for the direct effect of the loss of profits at point a. The indirect effect follows from the fact that as retailer 1's reaction function has been shifted, retailer 2 will also charge a higher price. Again, it will be optimal for both manufacturers to offer this two-part tariff so that the new equilibrium is at ẽ. Essentially, the same result is generated as in the Bonanno and Vicker's case, except that it is retailers who appropriate the rents from reduced inter and intra-brand competition.

Shaffer (1991a) also provides another result in his paper that highlights the possible inconsistency of U.S. anti-trust policy with respect to vertical restraints, and raises the important issue of where market power lies in a vertical marketing system. Essentially, he shows that while RPM and slotting allowances can both facilitate collusion, the former will be less harmful to

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[10] If contracts were not observable, the game collapses to that without fixed fees.

[11] It is assumed that if the slotting allowance is paid, the relevant manufacturer can contractually assure that his good will be purchased by the retailer, i.e. cheating by the retailer is ruled out.

welfare than retailing allowances. Given the structure of the game, the intuition for this result is straightforward: as manufacturers aim to maximize the profits of retailers, if both retailers are offered contracts with RPM, then each manufacturer will have to specify the retail price that would occur in the absence of either RPM or retailing allowances, i.e. e in **Figure 2**. If, however, only retailer 1 is offered a contract with RPM, then e´ can be achieved, which effectively means retailer 1 acts as a Stackelberg price leader, while retailer 2 is a price follower, and the manufacturer(s) not using RPM has no incentive to set the wholesale price in excess of marginal cost, because retailer 2 will simply want to maximize profits. Clearly, prices and profits increase with asymmetric RPM, however, this strategy is Pareto-dominated by retailing allowances where prices and profits are higher. The inconsistency in U.S. anti-trust policy is that while RPM is *per se* illegal, retailing allowances are not[12].

In the absence of retailing allowances, scarce retail shelf-space may still affect the type of vertical contract that a manufacturer can use. For example, Shaffer (1991b) has shown that a two-part tariff will not be a sufficient instrument when the manufacturer sells more than one brand of a good, and there is limited retail shelf-space. When there are multiple brands, the retailer may be able to exert bargaining power through brand selection. As a result, *strategic* rents may be gained from setting one good against another, as well as the *scarcity* rents from shelf-space. The former refers to the opportunity cost of carrying an extra brand, measured in terms of reduced sales of substitute brands, while the latter are the foregone profits from the most preferred excluded brand.

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[12] Of course there may be other explanations for the existence of retailing allowances. Given the reported high failure rates of new food products, negative franchise fees may represent a risk-sharing device offered by the principal to the agent, and, hence, are not necessarily anti-competitive.

Essentially, extra brands of a good will only be carried if their incremental profit is non-negative, i.e. a brand will be dropped if it results in foregone profits due to a reduction in sales of substitute brands. If a retailer is unwilling to accept rents less than the opportunity cost of any brand carried, brand-specific two-part tariffs will only result in the appropriation of the marginal contribution to retailer profits of a particular brand not all the strategic rent. Shaffer (1991b) shows that other vertical restraints will have to be adopted by the manufacturer in order to satisfy the sufficiency argument. *Full-line forcing* would be a sufficient constraint as the retailer is simply forced to carry the complete range of brands and is then charged a two-part tariff for each brand. Given that such a practice may be illegal, other restraints such as *brand discounts* and *aggregate rebates* can achieve the same objective. For example, with brand discounts, rather than specifying brand-specific contracts, the manufacturer charges a wholesale price equal to marginal cost and sets fees for each brand stocked singly, but gives a fee discount for the multiple stocking of brands, which reduces the retailer's benefit to the scarcity rents. Aggregate rebates will achieve the same objective, where the rebate is given for stocking the range of brands. Interestingly, both brand discounts and aggregate rebates were covered in the MMC report (1981) on vertical behavior in the UK food chain.

(iii) Summary

As the selective review of the vertical restraints literature indicates, while there is a common theme that simple two-part tariffs will generally have to be augmented/replaced by other vertical restraints in order to maximize joint vertical profits, there is no widespread agreement among economists as to whether vertical restraints are either socially desirable or harmful. The conventional view, largely stemming from Mathewson and Winter (1984), is that the use of

vertical restraints is socially beneficial to the extent that the aim of such restraints is either to eliminate double markups, to enhance services, or to share risk. However, to the extent that vertical restraints facilitate collusion, they may be deemed socially undesirable (Rey and Stiglitz, 1988). Furthermore, various vertical restraints may be substitutes for each other, hence, giving no *prima facie* case as to why some restraints should be prohibited and others regarded as permissible. Consequently, economic theory gives no clear guidance to policymakers and the courts as to how to treat such activities.

3. Competition Policy and Vertical Restraints

(i) Background to Competition Policy

In light of the preceding review, it is interesting to examine how the competition authorities in the U.S. and the UK have considered the welfare effects of vertical restraints in the food industries and (if possible) the factors that have been instrumental in their decisions. The policing of vertical restraints varies between countries, although common to most developed countries is the *per se* illegality of resale price maintenance. In the U.S., both minimum and maximum RPM have been *per se* illegal since 1975 (see Shaffer, 1991b), and other vertical restraints have been historically condemned under Section 3 of the Clayton Act and Section 1 of the Sherman Act. In recent years there seems to have been a shift away from this position. Shaffer (1991a) notes that in 1984, the Department of Justice in its *amicus* brief in *Monsanto Co. v. Spray-Rite Service Corp.* argued that RPM may be unsuitable for *per se* treatment because of recent arguments in the literature that it may be an efficient restraint. Also, Department of

Justice guidelines published in 1985 suggest that non-price restraints be removed from the area of policy except in instances where firms have a dominant position (Hay and Morris, 1991).

Some commentators, particularly from the 'Chicago School', have even argued for the *per se* legality of vertical restraints. For example, Bork (1978), argues that the differential treatment of RPM and other vertical restraints is inconsistent. However, despite Bork's strictures, the U.S. courts now generally use a *rule of reason* for vertical restraints other than RPM[13]. For example, in the case of exclusive territories and exclusive dealing, during the 1950s and 1960s, such contracts were treated as illegal *per se*, however, federal courts now apply a *rule of reason* standard, which allows manufacturers to show that such restraints can increase vertical efficiency and, hence, competition between manufacturers (Besanko and Perry, 1993). Not surprisingly, Bork considers this legal distinction between price and non-price vertical restraints as inconsistent.

In the case of the UK, vertical restraints are covered by various pieces of legislation. Price restraints come under the 1976 Resale Prices Act, such that minimum resale price maintenance is essentially *per se* illegal, although maximum resale price maintenance is not. Non-price restraints are dealt with under the 1973 Fair Trading Act, and its extension in the 1980 Competition Act which introduced the concept of anti-competitive practices such as full-line

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[13] The *Schwinn* (1967) and *Sylvania* (1977) cases formed the basis for the Supreme Court's current position on vertical restraints such as exclusive territories. In the former case, the Schwinn bicycle company was charged with violating Section 1 of the Sherman Act through its use of resale price maintenance and exclusive territory arrangements. Interestingly, while the Supreme Court found against both practices, the ruling suggested that the Court was uncomfortable at treating non-price vertical restraints as *per se* illegal (Bork, p.282). The latter case, however, effectively overruled the *Schwinn* ruling. Sylvania, a manufacturer of television sets, was charged with violating the *Schwinn* ruling by operating a retail franchise system along with exclusive territories for the franchisees. However, on appeal, the Supreme Court rejected the earlier *Schwinn* ruling on the grounds that non-price vertical restrictions such as exclusive territories had not been shown to have a detrimental effect on competition. In particular the Court felt that while such a restraint might reduce intra-brand competition, it would also stimulate inter-brand competition.

forcing and tie-ins. However, as Hay and Morris (1991) point out, such practices are only ruled on if deemed against the public interest in a monopoly investigation by the MMC, i.e. they are not *per se* illegal and are dealt with on a case-by-case basis.

Information on the incidence and practice of vertical restraints is often difficult to obtain as negotiations between manufacturers and retailers take place largely in private. Therefore, reviewing competition policy decisions is really the only way to get an empirical handle on the prevalence and type of vertical restraints used in the food industry. This is relatively easy in the case of the UK, as competition policy is conducted by a quasi-governmental organization that reports its findings. Due to the nature of this system, it is straightforward to be sure the survey of cases is comprehensive. However, in the case of the U.S., vertical restraints are dealt with through the courts, requiring reviews of court proceedings through on-line legal information systems such as Lexis-Nexis. Therefore, at this stage, this paper presents only an incomplete survey of such cases in the U.S. food industry. This exercise also provides an informal assessment on the consistency between the recent theoretical contributions and the decisions reached by the competition authorities. The results of these surveys are presented in the following two sections.

(ii) Vertical Restraints in the U.S. Food Sector

This section considers the rulings made by U.S. courts on vertical restraints in the U.S. food system. **Table 1** lists a series of cases for the period 1972 to 1991 which are drawn from a search made of the Nexis-Lexis on-line legal information system. This system reports the rulings of federal and district courts on a variety of issues, including anti-trust cases. In order to keep this case-study manageable, the search string chosen was based on the *Topco* (1972) case,

a landmark ruling in the food industry that highlighted an important distinction the U.S. courts draw between restraints that are purely vertical and those aimed at restricting horizontal competition[14]. It should be recognized though that this search strategy is likely to have generated some sample selection bias.

The search found 453 cases that cited the *Topco* case, of which seventeen cases related to the food industry. Due to the court-based system of anti-trust policy in the U.S., Lexis-Nexis gives a complete report of the court's deliberations, including the basis of the plaintiff's complaint, the defendant's position, and the court's ruling which usually cites precedent from previous cases and whether the restraint in question can be ruled on either a *per se* or *rule of reason* basis. The salient features of these proceedings are reported in **Table 1**. A number of observations can be made about these cases:

(a) First, of the seventeen cases, fourteen have involved either the distribution and marketing of branded alcoholic and non-alcoholic beverages or some form of franchised retailing, both of which can be considered as typical principal-agent relationships between upstream and downstream firms.

(b) Second, from column 1 in the table, which lists the principal form of restraint being used by the defendant firm, it can be seen that most of the classic forms of vertical restraint have been investigated by the courts in the case of the U.S. food industry: exclusive territories, exclusive dealing, refusals to supply/deal, retail price maintenance, tying arrangements and franchise fees, with exclusive territories being the most common, appearing in fourteen of the seventeen cases. Interestingly, unlike the MMC investigations in the UK which are discussed

[14] The authors are indebted to Howard Marvel for suggesting this particular line of search, and also for his advice on accessing the Lexis-Nexis system.

in the next section, none of the cases involve discounts by upstream firms to downstream firms. This may either reflect the fact that such cases would be dealt with under the Robinson-Patman Act or, as noted earlier, because discounts in the form of retailing allowances are currently not illegal *per se*.

(c) Third, the court rulings and commentary, as listed in columns 2 and 3, have followed the precedents set by the *Schwinn* and *Sylvania* cases referred to earlier. Prior to 1977, both retail price and non-price vertical restraints were ruled as *per se* illegal, whereas post-1977, the courts have treated non-price restraints as generally not being illegal. Resale price restraints have remained illegal, an exception being the *Liquor Corporation of New York* (1986) case, where state law was deemed to override federal law. The standard position of the courts since the mid-1970s on non-price vertical restraints in the food industry has been to adopt a *rule of reason* standard. Such an approach to vertical restraints was defined in the *Long John Silver/Martin Brower* (1991) case as hinging on whether the plaintiff can demonstrate that an anti-competitive effect has not been offset by a pro-competitive benefit.

This shift in court rulings after 1977 is best illustrated by cases involving the beer and soft drinks industries. In the case of beer, the *Coors* (1973/74) and (1975) cases reflect the precedent set by the earlier *Schwinn* case whereby both price and non-price restraints were ruled as *per se* illegal, although the Supreme Court did indicate that perhaps non-price restraints should be separated from price restraints in the case of "unique" products. In contrast, the *Coors* (1982) case reflects the *Sylvania* ruling that non-price restraints be treated on a *rule of reason* basis because reductions in intra-brand competition due to exclusive territories could be outweighed

by increased inter-brand competition. This seems to have become clear precedent by the time of the *Anheuser-Busch/Miller Brewing* (1987) case where a similar ruling was made[15].

In the case of soft drinks, the courts have generally ruled in favor of firms' non-price restraints. It seems from court decisions in this industry, that exclusive territories are regarded as a necessary incentive to bottlers to make investments in equipment, to market the product effectively, and to enhance inter-brand competition. Most importantly though, these activities are now expressly protected under the Soft Drinks Interbrand Competition Act (1981). This Act, which came about after many years of adverse decisions relating to the soft drinks industry by the Federal Trade Commission (FTC), explicitly protects from prosecution under the Sherman Act the use of exclusive territories to make, distribute and sell soft drinks that are trademarked, although price fixing and horizontal restraints are still deemed unlawful. Interestingly, the brewing industry has lobbied for a similar form of protection (Carlton and Perloff, 1990).

(d) Fourth, court decisions in the *Topco* (1972) and *Reese Foods* (1989) cases, and other subsequent rulings, draw a very clear distinction between vertical restraints that are purely vertical and those that are designed to restrict horizontal competition. This is clear in several cases where the courts ruled in favor of existing restraints. For example, in the *Long John Silver/Martin Brower* (1987) case, the court cited *Topco* as the standard example of a vertical agreement designed to allocate territories in order to minimize competition, whereas the exclusive territories cited in the particular case were purely vertical, and, hence, not *per se* illegal.

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[15] Interestingly, in the latter case, Stiglitz argued as an expert witness that non-price vertical restraints could be anti-competitive, and, hence, consistent with a horizontal conspiracy.

In summary, in the case of the U.S. food industry, the courts have made very consistent decisions concerning non-price vertical restraints since the mid-1970s, ruling that they should be judged by a *rule of reason* standard. In particular, the view of the courts is that while restraints such as exclusive territories reduce intra-brand competition, there is usually a concomitant increase in inter-brand competition due to efficiency gains. However, the courts clearly consider that price restraints, and those restraints that diminish horizontal competition are to be judged as illegal *per se*.

The question then arises as to how consistent the court rulings are with the economic theory of vertical restraints. It would seem that the shift towards treating non-price vertical restraints by a *rule of reason* standard does reflect, at least loosely, the ambiguity in the modern theory of vertical restraints, i.e. in certain circumstances, vertical restraints may be efficiency enhancing, and so should not be ruled as *per se* illegal, whereas if restraints are used to restrict horizontal competition, they are to be treated as illegal. This type of reasoning was noted by Bork in his summary of the opinion in the *Sylvania* case:

> "The opinion carefully reserved the possibility that some (unspecified) applications of vertical restrictions might justify *per se* prohibition and others (also unspecified) might fall under a case-by-case examination of competitive effects." (p.287).

(iii) Vertical Restraints in the UK Food Sector[16]

This section considers the UK MMC's decisions on the use of vertical restraints in the UK food sector[17]. Information compiled from the eighteen investigations into the food

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[16] This section draws on an earlier paper by McCorriston (1994).

[17] Not all of the investigations reported in Table 2 were conducted by the MMC; a small number of cases between 1978 and 1979 were considered by the Price Commission. However, for convenience, it will be assumed in the discussion that all investigations were carried out by the MMC.

industries, covering the period from 1976 to 1994, is summarized in **Table 2**. The information obtained from these reports gives details not only on the form of vertical restraints used and the level of discounts given to retailers, but also factors which were apparently instrumental in the MMC reaching its final decisions.

Column 1 lists the main form of discounts used in the eighteen industries investigated. The most common forms were quantity discounts, overriders and special prices (i.e. discounts related to the total size of the retailer's account). Special promotions also featured in a large number of cases while the supply of equipment was important in the ice-cream and frozen-food industries. Exclusive dealing and tying have been used in the beer and carbonated drinks industries.

The MMC's reports also give information on the extent of the discount. This is recorded in column 2 which shows that there was a large variation in the level of discounts across industries ranging from 5 percent in cigarettes to 35 percent in the flour and bread industry. The average (unweighted) level of discount was around 17 percent. Some MMC reports also give an indication of the costs of these discounts as a percentage of manufacturer's turnover. Again there was wide variation ranging from only 0.4 percent in cigarettes to 35 percent in the flour and bread industry.

Of interest to the MMC in their investigations has been the relative bargaining power between manufacturers and retailers. This is important in the context of the game played out in the theoretical literature which generally assumes that the manufacturers are the principals and retailers the agents. One proxy for market power in the manufacturing sector is the concentration ratio. In most of the MMC's investigations this was high with many industries recording the

relevant n-firm concentration ratio in excess of 90 percent (see column 4). However, in the evidence provided by manufacturers to the MMC, when asked to justify the use and level of discounts, they cited the bargaining power of some retailers. This, as Shaffer (1991a) suggests, may not be just due to the number and market share of retailers, but also due to limitations on shelf-space relative to the number of new products. Whether this was deemed relevant in the various investigations is noted in column 5. In eleven of the eighteen industries investigated, this was considered to be a key factor in determining the level of manufacturers' discounts. This also raises the question as to whether the theoretical models capture adequately manufacturer/retailer interactions, at least as far as the UK food sector is concerned.

Finally of concern to the MMC was whether such discounts were discriminatory in nature. In this case, the MMC had to assess whether the discounts given could be justified on cost considerations; if not, they would be regarded as discriminatory. The MMC's assessments for each investigation is recorded in column 6. The evidence shows that, in almost all cases, discounts were deemed to be discriminatory with the exception of discounts given in the biscuit and cigarette industries.

In certain countries, evidence of discrimination would be sufficient to rule such practices illegal. This is not necessarily the case in the UK, as is evident from the MMC's decisions reported in column 7. Interestingly, the MMC ruled that, in many cases, the discounts, albeit discriminatory, were passed on in lower prices to consumers. In essence, these decisions suggest that while discounts used in the UK food sector could potentially harm competition in retail markets, this would not necessarily be commensurate with lower consumer welfare. Of the

twenty decisions made by the MMC, in only nine cases were the use of vertical restraints deemed harmful to consumer welfare.

Given the informal basis of the evaluation of the MMC's investigations as they relate to the food sector in the UK, it is difficult to come to any clear-cut conclusion. No obvious pattern emerges in identifying a consistent set of factors on which the MMC based its decisions. While more formal analysis is awaited, the most that can be said is that the lack of consistency in the MMC's decisions mirrors the lack of consensus in the literature regarding the welfare effects of such vertical market practices.

4. Summary and Conclusions

In summary, this paper has considered interactions between (rather than within) different stages of a vertical marketing system from both a theoretical and competition policy perspective. Vertical restraints, which are a departure from the normal assumption of linear price contracts, can take a variety of forms and their legislative status and policing varies between countries. Such restraints have only recently been subject to rigorous analysis by economists, and have received virtually no attention from agricultural economists interested in the food system. Unfortunately, as this paper illustrates, while the economics literature is rich in analysis of such restraints, theory gives us no unambiguous prediction about their private and social effects, and, hence, no agreed approach to their regulation. In particular, there is an important tension between restraints that increase both private and social welfare and those that increase private and lower social welfare.

This ambiguity in the theoretical literature appears to be mirrored, albeit in different ways, in the decisions on vertical restraints of the U.S. courts and the UK competition authorities with regard to their respective food systems. In the case of the U.S., the cases reviewed covered the range of vertical restraints discussed in the literature, and to some extent exhibited consistent rulings in the sense that price restraints and restraints designed to restrict horizontal competition have been treated as *per se* illegal, while non-price restraints are not. However, the fact that such a distinction is made also seems to reflect the current status of the literature. In the latter case, there seems to be no apparent consistency in the UK MMC's decisions on whether such practices serve the public interest. In addition, the bulk of the MMC's investigations have appeared to focus on discounts rather than the types of restraint more typically discussed in the economics literature.

There is considerable scope for further research in this area. The most obvious need is to gauge the incidence and form of vertical restraints in European Union countries other than the UK. In addition, there is an interesting contrast between the type of vertical relationships investigated by the U.S. courts and the UK's MMC which would bear further investigation. Specifically, in the U.S., most of the cases surveyed seem to fit well the concept of manufacturer as principal and wholesaler/retailer as agent, while in the UK, the question arises as to who are principal and agent, and whether in fact interaction between vertical stages is better captured as a bilateral bargaining problem. How this affects the welfare impact of vertical contracts in the food system deserves further exploration.

1: Court Decisions on Vertical Restraints in the U.S. Food System

Product/Industry	Year of Final Ruling	Defendant	Principal Form of Restraint (1)	Court Ruling (2)	Commentary (3)
Private-Label Groceries/ Cooperative Association of Retailers	1972	Topco	Exclusive Territories	*Per se* violation of Sherman Act	Vertical restraint designed to minimize horizontal competition. Topco deemed not separate from its members.
Beer/Beer Distribution	1973/4	Coors	Resale Price Maintenance Exclusive Dealing Exclusive Territories Refusal to Supply	FTC told Coors to desist from these practices. Supreme Court upheld findings as *per se* violation of the Sherman Act.	Court considered non-price restraints as injurious and related to illegal price-fixing. While Court cited precedent of *Schwinn* case in ruling territorial restrictions illegal, felt this should probably yield when it involves a unique product.
Maxwell House Coffee/ Wholesaling and Institutional Buyers	1975	General Foods	Resale Price Maintenance Refusal to Supply	*Per se* violation of Sherman Act	Straightforward case of system designed to control prices.
Lemon-Lime Soft Drinks/ Bottling and Distribution of Soft Drinks	1975	Coca-Cola	Tying Arrangements Exclusive Territories	Plaintiff's claims under the Sherman Act rejected.	Coca-Cola succeeded in introducing Sprite by competing fairly.
Beer/Beer Distribution	1975	Coors	Resale Price Maintenance Exclusive Territories Refusal to Supply	Resale price maintenance and exclusive territories illegal.	*Per se* illegality of territorial restrictions should yield to situations where product is unique.
Soft Drinks/Bottling and Distribution of Soft Drinks	1976	Coca-Cola	Exclusive Territories	Not a *per se* violation of Sherman Act	Bottlers not limited to Coca-Cola products. System enhances inter-brand competition.
Wine/Wine Wholesaling	1980	MidCal Aluminum	Resale Price Maintenance (sanctioned under California statute)	*Per se* violation of the Sherman Act	Defense of "state action" doctrine could not override federal law.
Beer/Beer Wholesale and Retail Distribution	1982	Coors	Exclusive Territories Quality Controls Refusal to Supply	Not a *per se* violation of Sherman Act	No evidence of reduction in intra- and inter-brand competition. Refusal to supply simply wholesaler following contractual obligation with Coors.
Ice-Cream/Licensed Manufacture and Franchised Retailing	1982	Baskin and Robbins	Exclusive Territories Retailers Tied to Area Manufacturer and Baskin and Robbins Brand Name	Not a *per se* violation of Sherman Act	No reduction in intra- and inter-brand competition. Ice-cream and trademark not separate, so not a tying arrangement.
Waffles/Waffle House Franchising	1984	Waffle House	Exclusive Territories Tying Arrangements Termination of Contract	Not a *per se* violation of Sherman Act. Defensible under a *rule of reason.*	Tying arrangement necessary for product quality. Law upholds right of franchisor to terminate.
Liquor/Liquor Wholesaling and Retailing	1986	Liquor Corporation of New York	Resale Price Maintenance (sanctioned under New York Alcoholic Beverage Control Law)	Not a *per se* violation of the Sherman Act	New York law overrides federal law under 21st Amendment that there is a state interest in protecting small retailers.
Beer/Beer Distribution	1987	Anheuser Busch Miller Brewing	Exclusive Territories	Not a *per se* violation of Sherman Act. Defensible under a *rule of reason*	Vertical restraint did not reduce intra-brand competition at wholesale level. Would increase inter-brand competition through distributional efficiencies
Soft Drinks/Bottling and Distribution of Soft Drinks	1987	Pepsi-Cola	Exclusive Territories Refusal to Supply	Not *per se* violation of Sherman Act	Vertical restraints protected under the Soft Drinks Interbrand Competition Act (1981). Restraints would also have been lawful under a *rule of reason.*
Fried Chicken/Popeyes Franchising	1987	Popeyes	Exclusive Territories	Not a *per se* violation of Sherman Act	
Fast Food/Burger King Franchising	1988	Burger King	Exclusive Territories Refusal to Deal	Not a *per se* violation of Sherman Act. Defensible under *rule of reason.*	Refusal to deal was to prevent cannibalization of existing franchisees. Restraint increases inter-brand competition.
Spices and Gourmet Foods/Wholesaling and Distribution	1989	Reese Finer Foods	Exclusive Territories	*Per Se* Violation of Sherman Act	Not defensible under *rule of reason.* Precedent of *Topco* case. Stock of Reese owned by Reese distributors, thus a horizontal restriction on competition.
Frozen Fish/Wholesaling and Long John Silver Franchising	1991	Long John Silver/ Martin Brower	Exclusive Dealing Refusal to Deal	Not a *per se* violation of Sherman Act. Defensible under *rule of reason.*	Agreement is a classic vertical agreement and not related to price-fixing. Wholesaler provided Long John Silver with efficient, competitive service.

Source: Lexis-Nexis on-line legal information system.

Monopolies and Mergers Commission Decisions on Vertical Restraints in the UK Food System[1]

Industry	Year of Ruling	Principal Form of Restraint (1)	Size of Largest Discount (%) (2)	Cost of Discount/ Turnover (%) (3)	Structure of Upstream Stage[2] (%) (4)	Bargaining Power of Retailers? (5)	Evidence of Discrimination (6)	Served Public Interest? (7)
Frozen Foods	1976	Special Prices Quantity Discounts Supply of Equipment	17.5	7.4	CR3 = 65	Yes	Yes	No
Flour and Bread	1977	Early Settlement Quantity Discounts	35.0	NR	CR3 = 62	Yes	Yes	Yes
Cat and Dog Food	1977	Quantity Discounts Overriders	13.5	0.7	CR2 = 80	Yes	Yes	Yes
Sugar[3]	1978	Quantity Discounts Special Prices	NR	NR	CR3 = 91	Yes	Yes	No
Grocery Products[3]	1978	Quantity Discounts Overriders	NR	NR	CR5 = 66	No	Yes	No
Cigarettes[3]	1978	Quantity Discounts	15.0	NR	CR2 = 92	No	Yes	Yes
Biscuits[3]	1979	Overriders Special Promotions	7.5	14.0	CR2 = 49	Yes	No	Potentially
Ice-Cream	1979	Retrospective Bonus, Loans for Equipment	20.0	36.0	CR2 = 66	Yes	Yes	No
Beer	1981	Special Prices Overriders Special Promotions	15.0	5.3	CR5 = 81	No	Uncertain	Yes
Biscuits	1981	Special Prices Special Promotions	14.0	8.6	CR5 = 96	Yes	Yes	Yes
Cigarettes	1981	Special Promotions	5.0	0.4	CR5 = 99	No	No	Yes
Baked Beans	1981	NR	25.0	NR	CR3 = 71	Yes	Yes	Yes
Bread	1981	NR	14.0	NR	CR5 = 82	Yes	Yes	Yes
Salt	1986	Quantity Discounts Special Prices	17.5	NR	CR2 = 95	Yes	Yes	No
Beer	1989	Property Loans, Tying, Exclusive Dealing	NA	NR	NR	No	Yes	No
		Quantity Discounts	30.0	NR	NR	No	Yes	No
Carbonated Drinks	1990	Exclusive Dealing	NR	NR	CR2 = 65	No	No	No
		Overriders	NR	NR		No	Yes	Yes
Soluble Coffee	1991	Price Discounts	NR	NR	CR2 = 72	Yes	Yes	No
Ice-Cream	1994	Overriders Supply of Equipment	6.0	6.0	CR3 = 92	No	Yes	Yes

[1] All decisions by MMC unless otherwise stated.
[2] Concentration ratios at time of investigation.
[3] Investigation by Price Commission.
NR - not reported.
NA - not applicable.
Source: Compiled from Monopolies and Mergers Commission Reports (various) and Price Commission Reports (various).

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